

Claim Amendments

Claim 1 is amended.

Claims 3-6, 28, and 30 are canceled without prejudice.

Claims 32-41 are newly presented.

1. (currently amended) A method of manufacturing an optical head comprising a light source, an objective lens, a reflecting mirror that reflects beams of light from the light source to allow them to enter the objective lens, and an optical bench for maintaining the light source and the reflecting mirror, the method comprising:

placing the reflecting mirror and the optical bench on an external jig provided with a mirror holding portion for maintaining the reflecting mirror and opposing positioning walls provided on both sides in a horizontal direction of the mirror holding portion,

bonding and fixing the reflecting mirror and the optical bench by filling an adhesive between side faces provided in the optical bench and side faces of the reflecting mirror opposing these side faces while the reflecting mirror and the optical bench are placed on the external jig,

with the side faces of the reflecting mirror in contact with the positioning walls of the external jig and a reflecting plane of the reflecting mirror in contact with an angle reference plane of the mirror holding portion, with a reflecting plane of the reflecting mirror in contact with the mirror holding portion so as to specify a mounting angle of the reflecting mirror in a plane including an axis of light incident on and an axis of light reflected from the reflecting mirror, and

after bonding and fixing the reflecting mirror and the optical bench, demounting the optical head having the light source, the reflecting mirror, and the optical bench from the external jig.

2-6. (canceled)

7. (original) The method of manufacturing an optical head according to claim 1, wherein the reflecting mirror has a flat-plate shape.

8. (original) The method of manufacturing an optical head according to claim 1, wherein the reflecting mirror and the optical bench are bonded and fixed using a UV adhesive.

9-31. (canceled)

32. (new) The method of manufacturing an optical head according to claim 1, wherein the reflecting mirror is bonded and fixed by filling the adhesive in adhesive storages provided at vicinities of approximate centers of its two opposed side faces provided on the optical bench.

33. (new) A method of manufacturing an optical head comprising a light source, an objective lens for forming a light spot on an information recording medium, a member for reflecting beams of light, which reflects beams of light emitted from the light source to allow them to enter the objective lens and is positioned between the objective lens and the light source, and a resin optical bench for maintaining the light source,

wherein the member for reflecting beams of light of a reflecting mirror is obtained by forming a reflection film on a base having a softening point of at least 500°C, and the method of manufacturing comprises

integrally molding the member for reflecting beams of light and the resin optical bench by resin molding at 200°C to 400°C, with the member for reflecting beams of light being placed on a mold for molding provided with a fixing portion for maintaining the member for reflecting beams of light.

34. (new) The method of manufacturing an optical head according to claim 33, further comprising:

placing a suspension for supporting a lens holder for maintaining the objective lens movably in a normal direction and in a radial direction of the information recording medium in the mold for molding,

wherein when the resin molding is carried out, the member for reflecting beams of light, the suspension, the lens holder, and the resin optical bench are integrally molded.

35. (new) The method of manufacturing an optical head according to claim 33, further comprising:

maintaining the member for reflecting beams of light in the resin optical bench by its back surface and in the vicinities of its two end faces in a direction parallel to a surface of the information recording medium, but not in the vicinities of its two end faces in the normal direction of the information recording medium.

36. (new) The method of manufacturing an optical head according to claim 33, further comprising:

covering a reflecting plane of the member for reflecting beams of light with a substantially black resin at approximately four corners of the reflecting plane,
wherein a quantity of reflection at the approximately four corners is reduced.

37. (new) The method of manufacturing an optical head according to claim 33, further comprising:

covering a reflecting plane of the member for reflecting beams of light with a substantially black resin at approximately four corners of the reflecting plane, and
treating a surface of the resin covering the approximate four corners with a matte treatment.

38. (new) The method of manufacturing an optical head according to claim 33, wherein the reflection film is a metal film or a dielectric film formed from aluminum or chromium.

39. (new) The method of manufacturing an optical head according to claim 33, further comprising:

applying to the reflection film a coating having an antioxidative function and an antireflective function.

40. (new) The method of manufacturing an optical head according to claim 33, wherein the resin optical bench is formed of acrylic, PPS, polycarbonate, liquid crystal polymer, or polyolefin resin.

41. (new) The method of manufacturing an optical head according to claim 33, further comprising:

applying a photoabsorption film to approximately four corners of a reflecting plane of the member for reflecting beams of light,

wherein a quantity of reflection at the approximate four corners is reduced.